Title (en)

FLEXIBLY GUIDED ROTARY RESONATOR MAINTAINED BY A FREE ESCAPEMENT WITH PALLET

Title (de)

SICH DREHENDER RESONATOR MIT EINER FLEXIBLEN FÜHRUNG, DER VON EINER FREIEN ANKERHEMMUNG GEHALTEN WIRD

Title (fr)

RESONATEUR ROTATIF A GUIDAGE FLEXIBLE ENTRETENU PAR UN ECHAPPEMENT LIBRE A ANCRE

Publication

EP 3545369 B1 20201104 (FR)

Application

EP 17794727 A 20171107

Priority

- EP 16200152 A 20161123
- EP 2017078497 W 20171107

Abstract (en)

[origin: WO2018095592A1] Timepiece regulating member (300) comprising a detached escapement mechanism (200) with a lever (7), and a resonator (100) of quality factor Q, comprising an inertial element (2) with a pin (6) cooperating with a fork (8) of the lever (7), and subjected to the elastic return of two flexible blades (5), attached to the plate (1), which define together a virtual pivot with a main axis (DP), the lever (7) pivoting about a secondary axis (DS), wherein the resonator lift angle (β), when the pin (6) contacts the fork (8), is less than 10° and the ratio IB/IA between the inertia IB of the inertial element (2) relative to the main axis (DP), and the inertia IA of the lever (7) relative to the secondary axis (DS) is greater than 2Q.α2/(0.1.ττ.β2), α being the lift angle of the lever corresponding to the maximum angular stroke of the fork (8).

IPC 8 full level

G04B 15/08 (2006.01); **G04B 17/04** (2006.01); **G04B 17/28** (2006.01)

CPC (source: CH EP US)

G04B 15/08 (2013.01 - CH EP US); **G04B 15/14** (2013.01 - EP US); **G04B 17/045** (2013.01 - CH EP); **G04B 17/28** (2013.01 - EP US); **G04B 18/02** (2013.01 - EP US); **G04B 31/00** (2013.01 - EP); G04B 17/045 (2013.01 - US); G04B 17/26 (2013.01 - EP US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 3327515 A1 20180530; **EP 3327515 B1 20200506**; CH 713150 A2 20180531; CN 109983409 A 20190705; CN 109983409 B 20200915; CN 109983410 A 20190705; CN 109983410 B 20200929; CN 110023845 A 20190716; CN 110023845 B 20201023; CN 110023846 A 20190716; CN 110023846 B 20201103; CN 110023847 A 20190716; CN 110023847 B 20201222; CN 110235064 A 20190913; CN 110235064 B 20210312; EP 3545363 A2 20191002; EP 3545364 A1 20191002; EP 3545364 B1 20201028; EP 3545365 A1 20191002; EP 3545365 B1 20201216; EP 3545366 A2 20191002; EP 3545367 A2 20191002; EP 3545368 A1 20191002; EP 3545368 B1 20201118; EP 3545369 A2 20191002; EP 3545369 B1 20201104; EP 3545370 A2 20191002; JP 2019536021 A 20191212; JP 2019536034 A 20191212; JP 2019536038 A 20191212; JP 2019536067 A 20191212; JP 2019537015 A 20191219; JP 2020501167 A 20200116; JP 6810800 B2 20210106; JP 6828179 B2 20210210; JP 6828180 B2 20210210; JP 6931392 B2 20210901; JP 6931394 B2 20210901; JP 6931395 B2 20210901; US 11467537 B2 20221011; US 11487245 B2 20221101; US 11493882 B2 20221108; US 11520289 B2 20221206; US 11619909 B2 20230404; US 11675312 B2 20230613; US 2019243308 A1 20190808; US 2019271945 A1 20190905; US 2019278227 A1 20190912; US 2019302695 A1 20191003; US 2019369559 A1 20191205; US 2020064775 A1 20200227; WO 2018095592 A1 20180531; WO 2018095593 A2 20180531; WO 2018095593 A3 20190221; WO 2018095594 A1 20180531; WO 2018095595 A1 20180531; WO 2018095596 A2 20180531; WO 2018095596 A3 20180913; WO 2018095596 A4 20181101; WO 2018095997 A2 20180531; WO 2018095997 A3 20180830; WO 2018095997 A4 20181101; WO 2018095997 A9 20190815; WO 2018099616 A2 20180607; WO 2018099616 A3 20190221; WO 2018103978 A2 20180614; WO 2018103978 A3 20181129; WO 2018103978 A4 20190117

DOCDB simple family (application)

EP 16200152 A 20161123; CH 15442016 A 20161123; CN 201780072276 A 20170727; CN 201780072284 A 20170727; CN 201780072304 A 20170727; CN 201780072327 A 20170727; CN 201780072329 A 20171107; CN 201780072330 A 20171122; EP 17745178 A 20170727; EP 17745179 A 20170727; EP 17745180 A 20170727; EP 17746073 A 20170727; EP 17749674 A 20170727; EP 17752312 A 20170727; EP 17794727 A 20171107; EP 17803933 A 20171122; EP 2017069037 W 20170727; EP 2017069038 W 20170727; EP 2017069039 W 20170727; EP 2017069040 W 20170727; EP 2017069041 W 20170727; EP 2017069043 W 20170727; EP 2017078497 W 20171107; EP 2017080121 W 20171122; JP 2019524176 A 20171122; JP 2019526552 A 20170727; JP 2019527338 A 20170727; JP 2019527346 A 20170727; JP 2019547760 A 20170727; JP 2019547766 A 20171107; US 201716343509 A 20171122; US 201716344567 A 20170727; US 201716347286 A 20170727; US 201716462801 A 20170727; US 201716462812 A 20171107; US 201916418697 A 20190521